

1        A SYSTEM AND METHOD FOR EXCH ANGING DATA & COMMANDS  
2        BETWEEN AN OBJECT ORIENTED SYSTEM AND A RELATIONAL SYSTEM

3                    ABSTRACT OF THE DISCLOSURE

4            A system for exchanging data and commands between an object oriented system  
5    and a relational system. The system includes an Object-Relational Mapping (ORM)  
6    grammar, an ORM specification, Object Class Definitions, a relational database, an  
7    operating system, a Database Exchange Unit including an OR mapping unit, a schema  
8    generator, a schema reverse engineering unit and applications. The ORM specification  
9    is based on the ORM grammar and includes information for defining the mapping  
10   between object-oriented system and the relational system. The Object Class Definitions  
11   define the object-oriented system, and the relational database defines the relational  
12   system. The Database Exchange Unit executes in accordance with the ORM  
13   specification, and is the programs/routines that operate to translate data from the object  
14   model to the relational model, and vice versa. The present invention further comprises  
15   a number of methods including: a method for generating a ORM Data Structures; a  
16   method for generating a mapping unit; a method for generating a schema from an  
17   object model and an object-relational mapping specification; a method for generating an  
18   Object Class Definitions and an ORM specification from an ORM template specification  
19   and database schema; and a method for object streaming, and methods for efficient  
20   generation of persistently unique sequence numbers for new objects.